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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application for:

Julian Sinai, et al.

Serial No.: 09/412,050

Filing Date: October 4, 1999

For: TOOL FOR GRAPHICALLY DEFINING
DIALOG FLOWS AND FOR
ESTABLISHING OPERATIONAL
LINKS BETWEEN SPEECH
APPLICATIONS AND HYPERMEDIA
CONTENT IN AN INTERACTIVE
VOICE RESPONSE ENVIRONMENT

Examiner: Knepper, David B.

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APPEAL BRIEF

Dear Sir:

Applicants submit, in triplicate, this Appeal Brief pursuant to 37 C.F.R.

§1.192 for consideration by the Board of Patent Appeals and Interferences, along

with the fee for filing an Appeal Brief required by 37 C.F.R. §1.17(c). Please

charge any additional amount due, or credit any overpayment, to deposit account

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I. REAL PARTY IN INTEREST

The real party in interest of the present application is Nuance
Communications of Menlo Park, California.

II. RELATED APPEALS AND INTERFERENCES

There are no appeals or interferences known which will directly affect, be
affected by, or have a bearing on the Board's decision in the present appeal.

III. STATUS OF CLAIMS

Claims 1-70 are pending and are the subject of this appeal. Claims 1-70
stand rejected under 35 U.S.C. §103 as being unpatentable over U.S. Patent no.
6,173,266 of Marx et al. ("Marx") in view of U.S. Patent no. 6,141,724 of Butler et
al. ("Butler").

IV. STATUS OF AMENDMENTS

A Response to Final Office Action was filed on June 17, 2003, which did
not amend any claims. No amendment has been made to any of the claims in
the present application.

V. SUMMARY OF INVENTION

The present invention relates to a graphics-based tool that can be used to
graphically enable a speech application to access web site data, or to graphically
"speech-enable" a web site. Specification at p. 7, lines 9-12. In certain

embodiments, the tool 40 (Fig. 3) comprises two main parts: a first editor 41 and a hypermedia query mechanism 43. The first editor 41 allows the user to specify a spoken dialog between a person and a machine from a set of user-selectable components that define dialog interactions (Fig. 4, elements 66-70; Fig. 5A, elements 51, 52 and 54). The components may be referred to as "speech objects". Specification, p. 18, line 20 to p. 19, line 18; p. 8, lines 16-18.

The hypermedia query mechanism 43 (Fig. 3) includes, in certain embodiments, a second editor 44 and a runtime unit 45. Specification, p. 18, line 22 to p. 19, line 2. The second editor 44 allows the user to specify a correspondence between an element of a selected component (e.g., speech object) and an element of a hypermedia page. For example, the second editor 44 may be used to specify a correspondence between a property of a selected speech object and a field of a hypermedia page. Specification, p. 25, lines 1-5. The runtime unit 45 functionally links the selected one of the components with the hypermedia page during execution of the dialog, according to the specified correspondence. Specification, p. 25, lines 6-13; p. 26, lines 9-12; Figs. 3 and 5, elements 45 and 53.

VI. ISSUE

The issue is whether the present invention is obvious based on Marx in view of Butler.

VII. GROUPING OF CLAIMS

The claims do not stand or fall together, because the present application includes several independent claims that are separately patentable, while still pertaining to the same invention. For the reasons discussed in Applicants' arguments below (section "VIII"), claims 1-6 stand or fall together; claims 7-28 stand or fall together; claims 29-35 stand or fall together; claims 36-43 stand or fall together; claims 44-51 stand or fall together; claims 52-64 stand or fall together; and claims 65-70 stand or fall together.

Note that these claim groups are discussed below in an order which Applicants consider to be optimal for purposes of discussion, which does not precisely reflect the numerical order of the claims.

VIII. ARGUMENT

To establish a prima facie case of obviousness, three basic criteria must be met: 1) the prior art reference references must teach or suggest all of the claim limitations; 2) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings; and 3) there must be a reasonable expectation of success. In re Vaeck, 947 F.2d 488, 20 USPQ.2d 1438 (Fed. Cir. 1991); MPEP § 706.02(j).

The current rejections do not satisfy any of these three requirements, as will now be explained.

<u>A. The cited combination of art does not disclose or suggest *all of the limitations*</u>
<u>of the claimed invention.</u>

Marx, the primary reference, generally relates to a system for developing

interactive speech applications. In particular, Marx discloses a graphical user

interface that can be used to select and graphically link together "dialogue

modules" to define a call flow. See Marx abstract; Fig. 8. Marx also contains a

<u>general</u> disclosure that the computer system 300 that is used to develop the

speech application can be connected to the Internet via an Internet Services

Provider (ISP). Marx at col. 5, lines 20-24; col. 6, lines 1-8; Figure 3.

Butler, the secondary reference, discloses a system that enables a

developer to remotely design a telephony application for a call handling server.

Butler specifically discloses that software known as an application designer 32

can be obtained by the user (the person developing the telephony application) by

downloading it from a web site. Butler, col. 4 lines 54 et seq.; col. 5 lines 53-68.

<u>Claims 1-6</u>

Claim 1 recites:

1. A computer-implemented graphical design tool configured to
allow a user of a computer system **to graphically create an**
operational link between a hypermedia page and a component
defining a spoken dialog interaction between a person and a
machine.
(Emphasis added.)

Marx and Butler do not teach or suggest, either individually or in

combination, graphically creating an operational link <u>between a hypermedia page</u>

and a component that defines a spoken dialog interaction between a person and a machine, or a tool for enabling a computer user to do so. Although Applicants' arguments are directed to the cited combination of references, it is useful first to consider their individual disclosures, in order to ascertain what combination could be made from them, if any.

As a preliminary point, note that in Marx, the computer system 300 itself (col. 6, lines 1-8; Fig. 3) cannot represent the recited "component that defines a spoken interaction" of claim 1. While the computer system 300 can connect to the Internet and perhaps to a web page, Marx's graphically based "tool" does not allow a user to graphically create a link between the computer system itself and a hypermedia page; that is not the purpose of Marx's system. Hence, the remainder of this argument assumes that the "dialogue modules" in Marx are interpreted as the "component[s] that define[s] a spoken dialog interaction" in claim 1.

Marx does not disclose or suggest any ability to create links between the dialogue modules and web pages or any other hypermedia. Marx's mere general disclosure of Internet connectivity cannot be read to suggest creating operational links between a hypermedia page and a component that defines a spoken dialog interaction between a person and a machine, or a tool that allows this to be done. The examiner has failed to recognize the substantial difference between generally linking a computer system to the Internet or a web page, as disclosed in the cited art, versus specifically creating a link between a component that

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defines a spoken dialog interaction between a person and a machine, and a web page (or other hypermedia element).

Furthermore, the cited combination of art does not disclose or suggest all limitations of the present invention, because Butler does not provide the above-noted claim features that are absent from Marx. In fact, Butler adds nothing to Marx's teaching that is even relevant to the present invention. The Examiner emphasizes Butler's disclosure that software (the application designer 32) can be obtained by the user by downloading it from a web site. See Butler, col. 4 lines 54 et seq.; col. 5 lines 53-68. However, that disclosure provides no teaching or suggestion of creating an operational link between a hypermedia page and a component that defines a spoken dialog interaction, or a tool that allows one to do this graphically.

In view of these differences, no combination of Marx and Butler could disclose or suggest all of the limitations of claim 1. Therefore, the rejection was improper as to claim 1 and all claims which depend on it.

Claims 29-35

Claim 29 states:

29. A tool for authoring content for use in a voice response system, the tool comprising:
a first editor configured to allow a user to specify a spoken dialog between a person and a machine from a set of user-selectable components defining spoken dialog interactions; and
a second editor configured **to allow the user to specify operational links between hypermedia pages and said components.** (Emphasis added.)

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Claim 29 recites, *inter alia*, a second editor configured to allow the user to specify operational links between hypermedia pages and components that define spoken dialog interactions. No editor with this capability is disclosed or suggested in either Marx or Butler. This feature is also not recited in claim 1, which renders claim 29 separately patentable from claim 1. Therefore, the rejection is also improper as to claim 29 and its dependent claims.

Claims 44-51

Claim 44 recites:

44. A method of allowing a user of a computer system to create content for use in a voice response processing system, the method comprising:
   receiving user input **specifying a correspondence between an element of a hypermedia page and an element of a component that represents a spoken dialog interaction between a person and a machine**; and
   storing data representative of the correspondence based on the user input, the data **for use during execution of the spoken dialog.** (Emphasis added.)

Claim 44 recites specifying a correspondence between an element of a hypermedia page and an element of a component that represents a spoken dialog interaction between a person and a machine. This operation is not disclosed or even remotely suggest by the cited art. The examiner cites Marx's Fig. 7 and column 16, line 31 as suggesting this feature (Final Office Action, p. 5). However, the cited disclosure contains no suggestion of specifying a correspondence between an element (a property, for example) of a component

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that represents a dialog interaction between a person and a machine, and an

element (a field, for example) of a hypermedia page.

Further, Marx/Butler do not suggest that data representing such a

correspondence is then subsequently used during execution of a spoken dialog.

Therefore, the rejection is also improper as to claim 44 and its dependent claims.

This combination of claim features is not recited in the previously-discussed

independent claims, rendering claim 44 separately patentable from those claims.

Claims 7-28

Claim 7 is representative of claims 7-28 for purposes of this Appeal.

Claim 7 states:

> 7. A computer-implemented tool for allowing a user of a computer
> system to specify an operational link between a hypermedia page
> and a component defining a dialog interaction between a person
> and a machine, the tool comprising:
> an editor configured **to allow a user to specify a
> correspondence between an element of said component and
> an element of the hypermedia page**; and
> a runtime unit configured **to functionally link said
> component with the hypermedia page during execution of the
> dialog, according to the specified correspondence.**
> (Emphasis added.)

The cited references do not teach or suggest, either individually or in

combination, an editor configured to allow a user to specify a correspondence

between an element of a component which defines a dialog interaction between

a person and a machine and an element of a hypermedia page. The examiner

cites Marx's Fig. 7 and column 16, line 31 as suggesting the recited "allowing a

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user to specify a correspondence" (Final Office Action, p. 5). However, the cited disclosure contains absolutely no suggestion of specifying a correspondence between an element (a property, for example) of the component that represents a dialog interaction between a person and a machine and an element (a field, for example) of the hypermedia page.

Claim 7 also recites <u>a runtime unit configured to functionally link said component (which defines a dialog interaction between a person and a machine) with the hypermedia page during execution of the dialog, according to the specified correspondence</u>. This feature also is not disclosed or even remotely suggest by the cited art. The Examiner cites Marx at col. 17, lines 38-41 as suggesting this feature (Final Office Action, p. 5). However, Applicants are unable to see how the cited text has <u>any relevance</u> to this feature. The cited text certainly does not even remotely suggest creating a functional link between a component that represents a dialog interaction and a hypermedia page, during execution of a dialog, according to the specified correspondence.

This combination of features is not recited in the previously-discussed independent clams, rendering these claims separately patentable from the other groups of claims. For at least these reasons, therefore, the rejection is improper as to claim 7 and its dependent claims (and, by virtue of their similarity in the emphasized claim limitations, independent claims 14 and 21 and their dependent claims).

<u>Claims 52-64</u>

Claim 52 is representative of claims 52-64 for purposes of this Appeal.

Claim 52 states:

> 52. A method of allowing a user of a computer system to specify
> an operational link between a hypermedia page and a component
> that represents a dialog interaction between a person and a
> machine, the method comprising:
>   receiving user input specifying a correspondence between **a
> property of the component** and **a field of** the hypermedia page;
>   during execution of the dialog, automatically creating a
> functional link between the component and the hypermedia page
> according to the specified correspondence.
> (Emphasis added.)

Claim 52 is similar to claim 7 but further recites receiving user input

specifying a correspondence <u>between a property of the component</u> (i.e., the

component that represents a dialog interaction between a person and a machine)

and <u>a field of</u> the hypermedia page. The examiner cites Marx's Fig. 7 and

column 16, line 31 as suggesting the recited "specifying a correspondence" (Final

Office Action, p. 5). However, the cited disclosure contains no suggestion of

specifying a correspondence <u>between a property of a component</u> that represents

a dialog interaction between a person and a machine and <u>a field of</u> a hypermedia

page.

Claim 52 also recites automatically creating a functional link between the

component (which represents a dialog interaction between a person and a

machine) and the hypermedia page, during execution of the dialog, according to

the specified correspondence. The Examiner cites Marx at col. 17, lines 38-41

as suggesting the recited "creating a functional link" (Final Office Action, p. 5).

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However, the cited text is <u>not even relevant</u> to the aforementioned "creating a functional link", and certainly does not even remotely suggest automatically creating a functional link between the component (that represents a dialog interaction between a person and a machine) and the hypermedia page, during execution of the dialog, according to the specified correspondence.

This combination of claim features is not recited in the previously-discussed independent claims, rendering claims 52-64 separately patentable from those claims. For at least these reasons, therefore, the rejection is improper as to claim 52 and its dependent claims (and, by virtue of their similarity in the emphasized claim limitations, independent claim 58 and its dependent claims).

<u>Claims 36-43</u>

Claim 36 is representative of claims 36-43 for purposes of this Appeal.

Claim 36 states:

> 36. A tool for authoring content for use in a voice response system, the tool comprising:
>   a first editor configured to allow a user to specify a dialog between a person and a machine from a set of user-selectable components defining dialog interactions; and
>   **a hypermedia query mechanism including**
>   a second editor configured to allow a user to specify a correspondence between an element of a selected one of the components and an element of a hypermedia page, and
>   a runtime unit configured to functionally link the selected one of the components with the hypermedia page during execution of the dialog according to the specified correspondence.

Claim 36 recites a first editor <u>and</u> a hypermedia query mechanism, which includes a second editor <u>and</u> a runtime unit. The first editor is configured to allow a user to specify a dialog between a person and a machine from a set of user-selectable components defining dialog interactions. The second editor is configured to allow a user to specify a correspondence between an element of a selected one of the components and an element of a hypermedia page. The runtime unit is configured to functionally link the selected one of the components with the hypermedia page during execution of the dialog according to the specified correspondence. This combination of features is not recited in the independent claims discussed above, rendering these claims separately patentable from the other groups of claims discussed herein.

At least <u>the hypermedia query mechanism of claim 36, with its constituent elements</u>, is not disclosed or suggested by the cited combination of Marx and Butler. Therefore, the rejection is also improper as to claim 36 and its dependent claims (and, by virtue of their similarity in the emphasized claim limitations, independent claims 36, 39 and 41 and their dependent claims).

<u>Claim 65</u>

Claim 65 recites:

65. A method of allowing a user of a computer to create content for use in a voice response system, the method comprising:
  enabling the user to create graphically a dialog flow for a spoken dialog between a person and a machine by allowing the user to graphically specify a set of visually-represented speech objects to define the dialog; and
  enabling the user to establish graphically a functional link between a hypermedia page and one of the speech objects **by allowing the user**

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to incorporate graphically an object of a predetermined type into the dialog flow, the object of the predetermined type specifying a correspondence between an element of a hypermedia page and an element of one of the speech objects.
(Emphasis added.)

As noted above, Marx/Butler do not disclose or suggest enabling a user to establish graphically a functional link between a hypermedia page and a component that represents a dialog interaction, such as a speech object. Moreover, Marx/Butler do not disclose or suggest that this functionality can be accomplished by allowing the user to incorporate graphically an object of a predetermined type into a dialog flow, where the object specifies a correspondence between an element of a hypermedia page and an element of a speech object. This limitation is not present in any of the independent claims discussed above, rendering claim 65 separately patentable from the other groups of claims.

Therefore, the cited combination of art fails to disclose or suggest all of the limitations of any one of Applicants' independent claims.

B. There is *no motivation or suggestion* in the prior art for one of ordinary skill in the art to combine the teachings of Marx and Butler in attempt to achieve the present invention.

"[T]he examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed." In re Rouffet, 149 F.3d 1350, 1357 (Fed.

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Cir. 1998). In the present case, Marx and Butler were not directed to (and did not even recognize) the problem solved by the present invention, and the "motivation" alleged by the examiner lacks merit.

The present invention enables someone graphically to enable a speech application to access web site data. See, e.g., Applicants' specification at p. 7, lines 9-12. The references do not even hint at this objective. Marx is directed merely to defining a call flow graphically. Butler is directed to enabling software to be developed remotely for a telephony application. There is no motivation or suggestion in these references, or in the prior art generally, to combine their teachings in an effort to achieve the present invention.

Moreover, the only motivation to combine their teachings offered by the examiner is, "[B]ecause Butler teaches that links between a user and remote web pages can be used to enhance graphical design palettes . . .." This bare bones assertion over-generalizes Butler's teachings and ignores the problem to be solved.

For these additional reasons, therefore, the rejections are improper.

C. One of ordinary skill in the art would have *no reasonable expectation of success* of achieving the present invention based on the cited art.

In light of the wide gap between the disclosures of Marx/Butler and the present invention, and the different problems they are each directed to, one of ordinary skill in the art attempting to combine the teachings of the cited art would

have <u>no reasonable expectation of success</u> in achieving the present invention.

The rejection is therefore improper for this additional reason.

CONCLUSION

For the foregoing reasons, claims 1-70 are not unpatentable based on the

cited combination of art. Applicants therefore respectfully request reversal of the

rejections.

Respectfully submitted,

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IX. APPENDIX – CLAIMS ON APPEAL

1. (Original) A computer-implemented graphical design tool configured to allow a user of a computer system to graphically create an operational link between a hypermedia page and a component defining a spoken dialog interaction between a person and a machine.

2. (Original) A computer-implemented graphical design tool as recited in claim 1, wherein the hypermedia page comprises a World Wide Web page.

3. (Original) A computer-implemented graphical design tool as recited in claim 2, wherein the component comprises a speech object.

4. (Original) A computer-implemented graphical design tool as recited in claim 1, wherein the tool is configured to allow the user to graphically map a field of a hypermedia page to a property of a speech object.

5. (Original) A computer-implemented graphical design tool as recited in claim 1, wherein the component comprises a speech object.

6. (Original) A computer-implemented graphical design tool as recited in claim 4, wherein the speech object comprises a grammar and a set of prompts associated with the grammar.

7. (Original) A computer-implemented tool for allowing a user of a computer system to specify an operational link between a hypermedia page and a

component defining a dialog interaction between a person and a machine, the tool comprising:

an editor configured to allow a user to specify a correspondence between an element of said component and an element of the hypermedia page; and

a runtime unit configured to functionally link said component with the hypermedia page during execution of the dialog, according to the specified correspondence.

8. (Original) A computer-implemented tool as recited in claim 7, wherein the editor is configured to allow the user to specify the correspondence graphically.

9. (Original) A computer-implemented tool as recited in claim 7, wherein the hypermedia page comprises a World Wide Web page.

10. (Original) A computer-implemented tool as recited in claim 7, wherein the hypermedia page comprises a World Wide Web page and the component comprises a speech object.

11. (Original) A computer-implemented tool as recited in claim 10, wherein the editor is further configured to:

receive a user input specifying a field of the hypermedia page; and

respond to the user input by automatically selecting an appropriate speech object from a set of selectable speech objects, based on said field.

12. (Original) A computer-implemented tool as recited in claim 7, wherein the component comprises a speech object.

13. (Original) A computer-implemented tool as recited in claim 11, wherein the speech object comprises a grammar and a set of prompts associated with the grammar.

14. (Original) A computer-implemented graphical design tool for allowing a user of a computer system to graphically specify an operational link between a hypermedia page and a component that defines a spoken dialog interaction between a person and a machine, the tool comprising:

an editor configured to allow a user to specify a correspondence between an element of said component and an element of the hypermedia page; and

a runtime unit configured to functionally link said component with the hypermedia page during execution of the spoken dialog according to the specified correspondence.

15. (Original) A computer-implemented tool as recited in claim 14, wherein the hypermedia page comprises a World Wide Web page.

16. (Original) A computer-implemented tool as recited in claim 15, wherein said element of the hypermedia page is a field of the World Wide Web page.

17. (Original) A computer-implemented tool as recited in claim 14, wherein the hypermedia page comprises a World Wide Web page and the component

comprises a speech object.

18. (Original) A computer-implemented tool as recited in claim 14, wherein the component comprises a speech object.

19. (Original) A computer-implemented tool as recited in claim 18, wherein said element of the component is a property of the speech object.

20. (Original) A computer-implemented tool as recited in claim 18, wherein the speech object comprises a grammar and a set of prompts associated with the grammar.

21. (Original) A tool for allowing a user of a computer system to specify an operational link between a hypermedia page and a component that defines a dialog interaction between a person and a machine, the tool comprising:

means for allowing a user to specify a correspondence between an element of the component and an element of the hypermedia page; and

means for functionally linking the component with the hypermedia page during execution of the dialog according to the specified correspondence.

22. (Original) A tool as recited in claim 21, wherein the hypermedia page comprises a World Wide Web page.

23. (Original) A tool as recited in claim 22, wherein said element of the hypermedia page is a field of the World Wide Web page.

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24. (Original) A tool as recited in claim 21, wherein the hypermedia page comprises a World Wide Web page and the component comprises a speech object.

25. (Original) A tool as recited in claim 21, wherein the component comprises a speech object.

26. (Original) A tool as recited in claim 27, wherein said element of the component is a property of the speech object.

27. (Original) A tool as recited in claim 25, wherein the speech object comprises a grammar and a set of prompts associated with the grammar.

28. (Original) A tool as recited in claim 25, wherein the element of said hypermedia page is a field of the hypermedia page, the tool further comprising:

   means for receiving a user input specifying the field of the hypermedia page; and

   means for responding to the user input by automatically selecting an appropriate speech object from a set of selectable speech objects, based on said field.

29. (Original) A tool for authoring content for use in a voice response system, the tool comprising:

   a first editor configured to allow a user to specify a spoken dialog between a person and a machine from a set of user-selectable components defining

spoken dialog interactions; and

a second editor configured to allow the user to specify operational links between hypermedia pages and said components.

30. (Original) A tool as recited in claim 29, wherein the first editor is configured to allow the user to graphically specify the spoken dialog, and the second editor is configured to allow the user to graphically specify the operational links.

31. (Original) A tool as recited in claim 29, wherein the hypermedia pages comprise World Wide Web pages.

32. (Original) A tool as recited in claim 29, wherein the set of user-selectable components comprises a set of speech objects.

33. (Original) A tool as recited in claim 29, wherein the hypermedia pages comprise World Wide Web pages and the set of components comprise a set of speech objects.

34. (Original) A tool as recited in claim 33, wherein each of the set of speech objects comprises a grammar and a set of prompts associated with the grammar.

35. (Original) A tool as recited in claim 29, further comprising a runtime unit configured to functionally link the set of components with the hypermedia pages during execution of the spoken dialog according to the specified links.

36. (Original) A tool for authoring content for use in a voice response system,

the tool comprising:

a first editor configured to allow a user to specify a dialog between a person and a machine from a set of user-selectable components defining dialog interactions; and

a hypermedia query mechanism including

a second editor configured to allow a user to specify a correspondence between an element of a selected one of the components and an element of a hypermedia page, and

a runtime unit configured to functionally link the selected one of the components with the hypermedia page during execution of the dialog according to the specified correspondence.

37. (Original) A tool as recited in claim 36, wherein the first editor is configured to allow the user to specify the dialog graphically.

38. (Original) A tool as recited in claim 37, wherein the second editor is configured to allow the user to specify the correspondence graphically.

39. (Original) A design tool for authoring content for use in a voice response system, the tool comprising:

a first editor configured to provide a first graphical user interface allowing a user to graphically specify a spoken dialog between a person and a machine from a set of user-selectable components, each component for defining a spoken dialog interaction; and

a query mechanism including

a second editor configured to provide a second graphical user interface allowing the user to specify correspondences between properties of any of said components and fields of one or more hypermedia pages, and

a runtime unit configured to functionally link said components and said hypermedia pages during execution of the spoken dialog according to the specified correspondences.

40. (Original) A design tool as recited in claim 39, wherein each of the set of user-selectable components is a speech object.

41. (Original) A design tool for authoring content for use in a voice response system, the tool comprising:

a first editor configured to provide a first graphical user interface allowing a user to graphically specify a spoken dialog flow between a person and a machine from a set of user-selectable speech objects, the speech objects each for defining a spoken dialog interaction between a person and a machine; and

a Web query mechanism including

a second editor configured to provide a second graphical user interface allowing the user to specify correspondences between properties of any of said speech objects and fields of one or more World Wide Web pages, and

a runtime unit configured to functionally link said speech objects and said World Wide Web pages during execution of a spoken dialog according to the specified correspondences.

42. (Original) A design tool as recited in claim 41, wherein at least one of the set

of user-selectable components is a speech object.

43. (Original) A design tool as recited in claim 43, wherein the Web query mechanism is further configured to:

receive a user input directed to a field of a Web page; and

respond to the user input by automatically selecting an appropriate speech object from a set of selectable speech objects, based on said field.

44. (Original) A method of allowing a user of a computer system to create content for use in a voice response processing system, the method comprising:

receiving user input specifying a correspondence between an element of a hypermedia page and an element of a component that represents a spoken dialog interaction between a person and a machine; and

storing data representative of the correspondence based on the user input, the data for use during execution of the spoken dialog.

45. (Original) A method as recited in claim 44, further comprising, during execution of the spoken dialog, automatically creating a functional link between the component and the hypermedia page according to the specified correspondence.

46. (Original) A method as recited in claim 44, wherein the hypermedia page comprises a World Wide Web page.

47. (Original) A method as recited in claim 46, wherein said element of the

hypermedia page is a field of the World Wide Web page.

48. (Original) A method as recited in claim 44, wherein the hypermedia page comprises a World Wide Web page and the component comprises a speech object.

49. (Original) A method as recited in claim 44, wherein the component comprises a speech object.

50. (Original) A method as recited in claim 49, wherein said element of the component is a property of the speech object.

51. (Original) A method as recited in claim 49, wherein the speech object comprises a grammar and a set of prompts associated with the grammar.

52. (Original) A method of allowing a user of a computer system to specify an operational link between a hypermedia page and a component that represents a dialog interaction between a person and a machine, the method comprising:

receiving user input specifying a correspondence between a property of the component and a field of the hypermedia page;

during execution of the dialog, automatically creating a functional link between the component and the hypermedia page according to the specified correspondence.

53. (Original) A method as recited in claim 52, wherein said user input comprises a drag-and-drop operation between a customizer of the component

and a customizer associated with the hypermedia page.

54. (Original) A method as recited in claim 52, wherein the hypermedia page comprises a World Wide Web page.

55. (Original) A method as recited in claim 52, wherein the hypermedia page comprises a World Wide Web page and the component comprises a speech object.

56. (Original) A method as recited in claim 52, wherein the component comprises a speech object.

57. (Original) A method as recited in claim 56, wherein the speech object comprises a grammar and a set of prompts associated with the grammar.

58. (Original) A method of allowing a user of a computer to create content for use in a voice response system, the method comprising:

receiving first user input graphically specifying a spoken dialog between a person and a machine, the first user input including inputs directed to a set of user-selectable components defining spoken dialog interactions;

storing first data representing a dialog flow for the spoken dialog based on the first user input;

receiving second user input graphically specifying a correspondence between a field of a hypermedia page and a property of one of said components; and

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storing second data representing the correspondence based on the

second user input, wherein the first data and the second data are for use by the

voice response system to execute the spoken dialog.

59. (Original) A method as recited in claim 58, further comprising:

receiving third user input selecting a field of the hypermedia page; and

in response to the third user input, automatically identifying a component

of said set of user-selectable components, for inclusion in the spoken dialog.

60. (Original) A method as recited in claim 58, further comprising:

receiving third user input specifying a portion of the hypermedia page that

is to be text-to-speech converted at run-time; and

in response to the third user input, enabling text-to-speech conversion of

the specified portion of the Web page.

61. (Original) A method as recited in claim 58, wherein the hypermedia page

comprises a World Wide Web page.

62. (Original) A method as recited in claim 61, wherein the hypermedia page

comprises a World Wide Web page and the set of components comprises a set

of speech objects.

63. (Original) A method as recited in claim 58, wherein the set of user-

selectable components comprises a set of speech objects.

64. (Original) A method as recited in claim 63, wherein each of the set of

speech objects comprises a grammar and a set of prompts associated with the grammar.

65. (Original) A method of allowing a user of a computer to create content for use in a voice response system, the method comprising:

enabling the user to create graphically a dialog flow for a spoken dialog between a person and a machine by allowing the user to graphically specify a set of visually-represented speech objects to define the dialog; and

enabling the user to establish graphically a functional link between a hypermedia page and one of the speech objects by allowing the user to incorporate graphically an object of a predetermined type into the dialog flow, the object of the predetermined type specifying a correspondence between an element of a hypermedia page and an element of one of the speech objects.

66. (Original) A method as recited in claim 65, wherein the object of the predetermined type specifies a correspondence between a field of the hypermedia page and a property of the speech object.

67. (Original) A method as recited in claim 66, wherein said enabling the user to establish the functional link comprises enabling the user to specify graphically the correspondence using drag-and-drop inputs.

68. (Original) A method as recited in claim 65, wherein said enabling the user to establish the functional link comprises enabling the user to specify graphically the correspondence using drag-and-drop inputs.

69. (Original) A method as recited in claim 65, wherein said enabling the user to create graphically a dialog flow comprises:

receiving user input selecting a field of the hypermedia page; and

in response to the third user input, automatically identify an appropriate one of the speech object, for inclusion in the spoken dialog.

70. (Original) A method as recited in claim 65, wherein said enabling the user to establish graphically a functional link between a hypermedia page and one of the speech objects comprises:

receiving user input specifying a portion of the hypermedia page that is to be text-to-speech converted as part of a response to a Web query; and

in response to the third user input, enabling text-to-speech conversion of the specified portion of the Web page to be performed in response to a Web query.
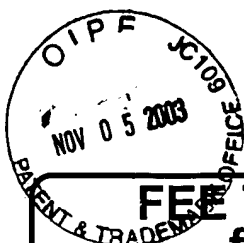
#AE/2654#
#/2700#

FEE TRANSMITTAL
for FY 2003

Effective 01/01/2003. Patent fees are subject to annual revision.

☐ Applicant claims small entity status. See 37 CFR 1.27.

TOTAL AMOUNT OF PAYMENT	($)	330.00

Complete if Known	
Application Number	09/412,050
Filing Date	October 4, 1999
First Named Inventor	Julian Sinai
Examiner Name	Knepper, David D.
Group/Art Unit	2654
Attorney Docket No.	3932P007

RECEIVED

METHOD OF PAYMENT *(check all that apply)*

☒ Check ☐ Credit card ☐ Money Order ☐ Other ☐ None
☐ Deposit Account

Deposit Account Number	02-2666
Deposit Account Name	Blakely, Sokoloff, Taylor & Zafman LLP

The Commissioner is authorized to: *(check all that apply)*

☐ Charge fee(s) indicated below   ☒ Credit any overpayments

☒ Charge any additional fee(s) required under 37 CFR §§ 1.16, 1.17, 1.18 and 1.20.

☐ Charge fee(s) indicated below, **except for the filing fee** to the above-identified deposit account

FEE CALCULATION

1. BASIC FILING FEE

Large Entity Fee Code	Fee ($)	Small Entity Fee Code	Fee ($)	Fee Description	Fee Paid
1001	770	2001	385	Utility filing fee	
1002	340	2002	170	Design filing fee	
1003	530	2003	265	Plant filing fee	
1004	770	2004	385	Reissue filing fee	
1005	160	2005	80	Provisional filing fee	

SUBTOTAL (1) ($)

2. EXTRA CLAIM FEES

	Extra Claims	Fee from below	Fee Paid
Total Claims	☐ - 70** = ☐	X ☐ =	☐
Independent Claims	☐ - 12 = ☐	X ☐ =	☐
Multiple Dependent		☐ =	☐

Large Entity Fee Code	Fee ($)	Small Entity Fee Code	Fee ($)	Fee Description
1202	18	2202	9	Claims in excess of 20
1201	86	2201	43	Independent claims in excess of 3
1203	290	2203	145	Multiple Dependent claim, if not paid
1204	86	2204	43	**Reissue independent claims over original patent
1205	18	2205	9	**Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) ($)

**or number previously paid, if greater, For Reissues, see below

FEE CALCULATION (continued)   NOV 1 0 2003

3. ADDITIONAL FEES

Technology Center 2600

Large Entity Fee Code	Fee ($)	Small Entity Fee Code	Fee ($)	Fee Description	Fee Paid
1051	130	2051	65	Surcharge - late filing fee or oath	
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet.	
2053	130	2053	130	Non-English specification	
1812	2,520	1812	2,520	For filing a request for *ex parte* reexamination	
1804	920 *	1804	920 *	Requesting publication of SIR prior to Examiner action	
1805	1,840 *	1805	1,840 *	Requesting publication of SIR after Examiner action	
1251	110	2251	55	Extension for reply within first month	
1252	420	2252	210	Extension for reply within second month	
1253	950	2253	475	Extension for reply within third month	
1254	1,480	2254	740	Extension for reply within fourth month	
1255	1,210	2255	605	Extension for reply within fifth month	
1404	330	2401	165	Notice of Appeal	
1402	330	2402	165	Filing a brief in support of an appeal	330.00
1403	290	2403	145	Request for oral hearing	
1451	1,510	2451	1,510	Petition to institute a public use proceeding	
1452	110	2452	55	Petition to revive - unavoidable	
1453	1,330	2453	665	Petition to revive - unintentional	
1501	1,330	2501	665	Utility issue fee (or reissue)	
1502	480	2502	240	Design issue fee	
1503	640	2503	320	Plant issue fee	
1460	130	2460	130	Petitions to the Commissioner	
1807	50	1807	50	Processing fee under 37 CFR 1.17(q)	
1806	180	1806	180	Submission of Information Disclosure Stmt	
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	
1809	770	1809	385	Filing a submission after final rejection (37 CFR § 1.129(a))	
1810	770	2810	385	For each additional invention to be examined (37 CFR § 1.129(b))	
1801	770	2801	385	Request for Continued Examination (RCE)	
1802	900	1802	900	Request for expedited examination of a design application	
Other fee (specify)				_____	

* Reduced by Basic Filing Fee Paid

SUBTOTAL (3) ($) 330.00

SUBMITTED BY

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Signature				Date	11/03/03

Complete (if applicable)